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MR2919-13

Serial Number: 09/912,455

Reply to Office Action dated 16 December 2003

**IN THE CLAIMS:**

This Listing of Claims will replace all prior versions, and listings, of claims in the subject Patent Application:

**Listing of Claims:**

1. **(Currently Amended)** A method of manufacturing an antenna capable of being mounted on a printed circuit board, comprising:
  - selecting design dimensions of a unitary piece of material according to an operating wavelength;
  - stamping out the unitary piece of material from a larger section of material according to the design dimensions to form the antenna, the unitary piece comprising:
    - a circular area having a center and an outer region peripherally thereabout; and
    - a stem area having a first end and a second end for mounting on the printed circuit board, the first end joined with the outer region, the unitary piece bendable at the first end and the outer region.
2. **(Original)** The method of claim 1 further comprising:
  - determining the operating wavelength from an operating frequency.

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3. (Original) The method of claim 1 further comprising:  
bending the unitary piece at the first end and the outer region so that the  
circular area is perpendicular to the stem area.
4. (Original) The method of claim 1 wherein the design dimensions comprise:  
a radius defined from the center to a point on the outer region along a radial  
axis.
5. (Original) The method of claim 4 wherein the radius is approximately equal  
to one twelfth of the operating wavelength.
6. (Original) The method of claim 4 wherein the radius is approximately equal  
to one thirteenth of the operating wavelength.
7. (Original) The method of claim 4 wherein the stem area protrudes outward  
from the outer region along the radial axis.
8. (Original) The method of claim 1 wherein the design dimensions comprise:  
a radius defined from the center to a point on the outer region along a radial  
axis; and  
a stem length defined from the first end to the second end.

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9. (Original) The method of claim 8 wherein the stem length is approximately equal to the radius.
10. (Original) The method of claim 8 wherein the stem length is approximately equal to one twelfth of the operating wavelength.
11. (Original) The method of claim 8 wherein the stem length is approximately equal to one tenth of the operating wavelength.
12. (Original) The method of claim 1 wherein the stem area is not tapered between the first end and the second end so that a first width at the first end of the stem area is equivalent to a second width at the second end of the stem area.
13. (Withdrawn) The method of claim 1 wherein the stem area exhibits a step change in width between the first end and the second end so that a first width at the first end of the stem area exceeds a second width at the second end of the stem area.
14. (Withdrawn) The method of claim 1 wherein the stem area is gradually tapered between the first end and the second end so that a first width at the first end of the stem area exceeds a second width at the second end of the stem area.

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15. (Withdrawn) The method of claim 1 wherein the larger section of material is planar.
16. (Original) The method of claim 1 wherein the unitary piece of material is planar prior to bending of the unitary piece.
17. (Previously presented) The method of claim 1 further comprising:  
bending the unitary piece into a shape capable of operating as the antenna.
18. (Original) The method of claim 1 wherein the unitary piece of material comprises a continuous piece of flat metal.
19. (Previously Presented) The method of claim 1, further comprising:  
a foot area having a third end and a fourth end, the third end joined with the second end, the unitary piece bendable at the third end and the second end.
20. (Original) The method of claim 19 further comprising:  
bending the unitary piece so that the circular area is perpendicular to the stem area, and so that the stem area is perpendicular to the foot area.
21. (Original) The method of claim 19 further comprising:

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bending the unitary piece at the first end and the outer region so that the circular area is perpendicular to the stem area.

22. (Original) The method of claim 19 further comprising:

bending the unitary piece at the third end and the second end so that the stem area is perpendicular to the foot area.

23. (Original) The method of claim 19 wherein the design dimensions comprise:

a radius defined from the center to a point on the outer region along a radial axis;

a stem length defined from the first end to the second end; and

a foot length defined from the third end to the fourth end.

24. (Original) The method of claim 19 wherein a first width at the second end of the stem area is equivalent to a second width at the third end of the stem area.

25. (Original) The method of claim 24 wherein the stem area is not tapered between the first end and the second end so that a third width at the first end of the stem area is equivalent to the first width at the second end of the stem area.

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26. (Withdrawn) The method of claim 24 wherein the stem area is gradually tapered between the first end and the second end so that a third width at the first end of the stem area exceeds the first width at the second end of the stem area.
27. (Withdrawn) The method of claim 1, further comprising:  
a root area having a third end and a fourth end, the third end joined with the second end, the second end having a first width and the third end having a second width, the first width exceeding the second width.
28. (Withdrawn) The method of claim 27 further comprising:  
bending the unitary piece at the first end and the outer region so that the circular area is perpendicular to the stem area.
29. (Withdrawn) The method of claim 27 wherein the design dimensions comprise:  
a radius defined from the center to a point on the outer region along a radial axis;  
a stem length defined from the first end to the second end; and  
a root length defined from the third end to the fourth end.
30. (Withdrawn) The method of claim 27 wherein the stem area is not tapered between the first end and the second end so that a third width at the first end of the stem area is equivalent to the first width at the second end of the stem area.

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31. (Withdrawn) The method of claim 27 wherein the stem area is gradually tapered between the first end and the second end so that a third width at the first end of the stem area exceeds the first width at the second end of the stem area.